Tsunami science in the Information Age

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Abstract. As is common in all scientific disciplines, the scientific study of tsunamis has shown continual evolution over the past half century. What is interesting to note, however, is the startling degree to which the discipline has changed in the decade from 1990 to 2000. To be sure, a large portion of the change is related to the steady advances in understanding and knowledge that one associates with any scientific endeavor. What this paper will discuss, however, are the ways in which a number of factors outside the control of tsunami scientists have converged to propel the discipline forward more rapidly than in previous eras. Among these factors are: rapid advances in global communications, order-of-magnitude increases in available computing power, development of increasingly finer-resolution sensor technologies, and a spate of destructive local tsunamis. Any one of these factors would produce advances, but their cumulative interaction has led to significant changes in our understanding of the tsunami phenomenon and our approach to studying it. It is not an overstatement to say that the advances of the last decade have rapidly brought tsunami science to a point where the possibility of truly mitigating against tsunami hazards is less of a hoped-for vision and more of an attainable reality.

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